IN THE SPECIFICATION:

On Page 10, please amend the two lines following third complete paragraph to read as follows:

$S_p = a_1 m(^{235}U) + a_2 m(^{238}U) + a_3 m(^{239}Pu) + a_4 m(^{241}Pu)$

$Sr = b_1 m(^{235}U) + b_2 m(^{239}U) + b_3 m(^{239}Pu) + b_4 m(^{241}Pu)$

On page 11, please amend the third paragraph (lines 7-9) to read as follows:

R2 = correlation between the mass m(^{239}Pu) of the plutonium 239 isotope and the mass m(^{241}Pu) of the plutonium 241 isotope.

IN THE CLAIMS:

Please amend claims 4, 6, and 9 to read as follows:

4. (Twice amended) Device for analyzing an object (2), for example a radioactive waste package, that may contain fissile ~~material or~~ fertile material or both, the fissile material comprising M fissile isotopes ~~and~~ the fertile material comprising N fertile isotopes, where M and N are integer numbers equal to at least 1, this device being characterized in that it comprises:

-means (8, 10) of irradiating the object by a neutron flux consisting of thermal, epithermal and fast neutrons and resulting from a sequence of initial fast neutron pulses, the thermal neutrons causing fissions in the fissile material and the epithermal and fast neutrons causing fissions in the fissile material and in the fertile material,

-means (4, 52) of counting neutrons, designed to measure prompt and delayed neutronic signals emitted by the object after each pulse, and

-means (6) of processing the signals thus measured, designed to accumulate these signals and, after the last pulse, to obtain the sum of all signals, to use this sum to